Vol. 37 Nos. 19–21 2007

QD 241 .S85
QD241 .S85
Synthetic communications.
v. 37, no. 19-21 (2007)
Received: 2007-11-07 08:51:29
Stacks
UH MANOA LIBRARY

Synthetic Communications®

An International Journal for Rapid Communication of Synthetic Organic Chemistry

executive editor

Michael Kolb

associate editors

Mukund K. Gurjar
Takeaki Naito
Philip Page
Krzysztof Wojciechowski
Tamejiro Hiyama

Included in this print edition
No. 19
No. 20
No. 21

Taylor & Francis
Taylor & Francis Group

Synthetic Communications

Executive Editor

MICHAEL KOLB
Vice President, Chemical Development
Wyeth Research
401 North Middletown Road
Pearl River, NY 10965

Associate Editors

MUKUND K. GURJAR
National Chemical Laboratory
Pune, India

PHILIP PAGE
Loughborough University, Loughborough
Leicestershire, United Kingdom

TAKEAKI NAITO
Kobe Pharmaceutical University
Motoyamakita, Higashinada, Kobe, Japan

KRZYSZTOF WOJCIECHOWSKI
Institute of Organic Chemistry
Polish Academy of Sciences
Warszawa, Poland

TAMEJIRO HIYAMA
Kyoto University
Kyoto, Japan

Associate Editor Emeritus

HANS WYNBERG
Syncom, B.V.
Groningen, The Netherlands

Abstracted/Indexed in: Chemical Abstracts, Chemistry Citation Index, Current Chemical Reactions, Current Contents/Physical, Chemical, and Earth Sciences, Derwent Infromation, Ltd., EMBASE/Excerpta Medica, Index Chemicus, Reaction Citation Index, Science Citation Index Expanded (SCIE)

Synthetic Communications (ISSN: 0039-7911) is published monthly except in January, April, July, and November for a total of 8 print issues per year by Taylor & Francis Group, LLC., 325 Chestnut St., Suite 800, Philadelphia, PA 19106. *Synthetic Communications* (Online ISSN: 1532-2432) is published online biweekly for a total of 24 issues per year. Periodicals postage paid (Permit no. 714-670) at Philadelphia, PA and additional mailing offices.

US Postmaster: Please send address changes to Synthetic Communications c/o Taylor & Francis Group, LLC, 325 Chestnut St. Philadelphia, PA 19106.

Annual Subscription, Volume 37, 2007

Print ISSN - 0039-7911, Online ISSN - 1532-2432

Institutional subscribers: $2033/£3355; Personal: $502/£304

An institutional subscription to the print edition includes free access to the online edition for any number of concurrent users across a local area network.

Production and Advertising Office: 325 Chestnut Street, Philadelphia, PA 19106. Tel - 215-625-8900, Fax - 215-625-8563. Production Editor: Patricia Donofrio

Subscription offices: USA/North America: Taylor & Francis Group, LLC., 325 Chestnut Street, Philadelphia, PA 19106. Tel: 215-625-8900, Fax: 215-625-2940. **UK/Europe**: Taylor & Francis Customer Service, Sheepen Place, Colchester, Essex CO3 3LP, UK. Tel: 44 (0) 20 7017 5544; Fax: 44 (0) 20 7017 5198. For a complete guide to Taylor & Francis Group's journal and book publishing programs, visit our website: **www.taylorandfrancis.com**.

Copyright © 2007 Taylor & Francis Group, LLC. All rights reserved. No part of this publication may be reproduced, stored, transmitted, or disseminated in any form or by any means without prior written permission from Taylor & Francis Group, LLC. Taylor & Francis Group, LLC. grants authorization for individuals to photocopy copyright material for private research use on the sole basis that requests for such use are referred directly to the requester's local Reproduction Rights Organization (RRO), such as the Copyright Clearance Center (www.copyright.com) in the USA or the Copyright Licensing Agency (www.cla.co.uk) in the UK. This authorization does not extend to any other kind of copying by any means, in any form, and for any purpose other than private research use. The publisher assumes no responsibility for any statements of fact or opinion expressed in the published papers. The appearance of advertising in this journal does not constitute an endorsement or approval by the publisher, the editor, or the editorial board of the quality or value of the product advertised or of the claims made for it by its manufacturer.

Permissions. For further information, please visit: http://www.tandf.co.uk/journals/permissions.html

October 2007

SYNTHETIC COMMUNICATIONS®

Volume 37, Number 19, 2007

CONTENTS

Graphical Abstracts 3265

Facile Synthesis of Bibenzyl by Reductive Homocoupling of Benzyl Halides in Aqueous Media 3273
J. Liu and B. Li

Copper-Free, Efficient, Palladium(II)-Catalyzed Coupling of Unactivated Aryl Iodides with Terminal Alkynes 3279
T. Ren, Y. Zhang, W. Zhu, and J. Zhou

One-Pot Direct Synthesis of Thiocarbamates from Aniline, Carbon Monoxide, and Thiols Catalyzed by Selenium 3291
X. Zhang and S. Lu

Europium Triflate–Catalyzed One-Pot Synthesis of 2,4,5-Trisubstituted-1*H*-imidazoles via a Three-component Condensation 3301
C. Yu, M. Lei, W. Su, and Y. Xie

Total Synthesis of Neuroprotective Dictyoquinazol A, B, and C 3311
C. H. Oh and C. H. Song

Study on the Synthesis and Bioactivity of Novel Mahkoside A Derivatives 3319
Y.-B. Zhang, P.-Y. Zhang, G.-F Dai, and H.-M. Liu

Solvent-Free Synthesis of Benzothiazolines in the Presence of Alumina 3329
M. Kodomari, A. Satoh, R. Nakano, and T. Aoyama

Expeditious Synthesis of New 3,4,6-Trihydroxythiepanes from D-(-)-Quinic Acid 3337
T.-L. Shih and Y.-C. Fang

Scandium Triflate–Promoted Addition of Organozinc Reagents to Benzaldiminetricarbonylchromium Derivatives 3351
K. Ishimaru, K. Ohe, and T. Kojima

65 400H1 XL 169
12/09 31249-200 UA
T&F Group

Pd/C: A Recyclable Catalyst for Cyanation of Aryl Halides with $K_4[Fe(CN)_6]$ 3359
Y.-Z. Zhu and C. Cai

Synthesis of Piperidine Derivatives by Reduction of Pyridinium Salts 3367
Z. Tang, J. Mayrargue, and M. Alami

$Ce(SO_4)_2$-Mediated Nitration of *N,N*-Dialkylanilines with $NaNO_2$ in Water 3381
X. Yang and C. Xi

Practical Synthesis of New β-Diketone-Connected Bipyridine and Its Conversion to Pyrazole-Centered Bipyridine Ligand 3393
W. Zhang, J. Liu, H. Zhu, W. Gao, and L. Sun

Efficient and Convenient One-Pot Synthesis of Phosphoramidates and Phosphates 3403
A. K. Gupta, J. Acharya, D. K. Dubey, and M. P. Kaushik

Improved Synthesis of Gefitinib and Erlotinib Hydrochloride- Anticancer Agents 3409
V. Chandregowda, G. V. Rao, and G. C. Reddy

Rapid, Chemoselective and Facile Synthesis of Azines by Hydrazine/I_2 3417
H. M. Nanjundaswamy and M. A. Pasha

Regioselective Photochemical and Microwave Mediated Monobromination of Aromatic Compounds using 2,4,4,6–Tetrabromo-2,5-cyclohexadienone 3421
N. Gupta, G. L. Kad, V. Singh, and J. Singh

Synthesis and Antimicrobial Activity of 1-[(Substituted Carbamoyl)Amino]-1*H*,3*H*-1λ^5-[1,3,2]oxazaphospholo[3,4-a]benzimidazol-1-ones 3429
U. Anasuyamma, P. Haranath, M. A. Kumar, C. S. Reddy, and C. N. Raju

Efficient Synthesis of (1R)-[3,5-Bis(trifluoromethyl) phenyl] Ethanol, a Key Intermediate for Aprepitant, an NK-1 Receptor Antagonist 3439
P. J. Vankawala, N. Kolla, C. R. Elati, M. Sreenivasulu, K. A. Kumar, Y. Anjaneyulu, S. Venkatraman, A. Bhattacharya, and V. T. Mathad

Efficient and Green Method for the Synthesis of 1,5-Benzodiazepine and Quinoxaline Derivatives in Water 3447
P. Hazarika, P. Gogoi, and D. Konwar

Efficient Method for the Synthesis of Benzimidazoquinazoline Derivatives with Three-Point Diversity 3455
B. Saha, S. Sharma, and B. Kundu

Volume 37, Number 20, 2007

CONTENTS

Graphical Abstracts 3471

Novel Synthesis and Characterization of 1,3-Bis (2-dihydrothiazolyl)thiaalkoxy-*p*-*tert*-butylcalix[4]arenes 3479
B. Zhao, Y.-Q. Feng, and S.-S Zhang

Ferric Sulphate Hydrate–Catalyzed, Microwave-Assisted Synthesis of 2,3-Unsaturated *O*-Glycosides via the Ferrier Reaction 3485
G. Zhang and Q. Liu

DMSO-Aided *o*-Iodoxybenzoic Acid (IBX) Oxidation of Fmoc-Protected Amino Alcohols 3493
J. J. Chen and V. Aduda

Preparation of Some Derivatives of N-*tert*-Butyldecahydro-3-isoquinoline Carboxamide 3501
D. M. Casper and S. R. Hitchcock

Chemoenzymatic Synthesis and Biological Evaluation of (−)-Conduramine C-4 3509
A. Bellomo, C. Giacomini, B. Brena, G. Seoane, and D. Gonzalez

Safer Conditions for the Curtius Rearrangement of 1,3,5-Benzenetricarboxylic Acid 3519
M. C. Davis

Opening of Epoxide Rings Catalyzed by Niobium Pentachloride 3529
M. G. Constantino, V. L. Júnior, P. R. Invernize, L. C. da Silva Filho, and G. V. J. da Silva

Dihydropyran as a Template for Lactone Synthesis 3541
M. P. Brichacek and R. M. Carlson

Optimized Synthesis and Simple Purification of 2,5-Diamino-thiophene-3,4-dicarboxylic Acid Diethyl Ester 3551
M. Bourgeaux, S. Vomscheid, and W. G. Skene

Synthesis of Benzo[*b*]thiophene Carboxamides Connected to 4-Arylpiperazines through a Benzylic Spacer: Potential Ligands with 5-HT_{1A} Binding Affinity 3559
H. Pessoa-Mahana, R. Acevedo, R. Araya-Maturana, C. Saitz, and C. D. Pessoa-Mahana

Synthesis of the Potassium Channel Opener (3*S*,4*R*)-3,4-Dihydro-4-(2,3-dihydro-2-methyl-3-oxo-pyridazin-6-Yl)oxy-3-hydroxy-6-(3-hydroxyphenyl)sulphonyl-2,2,3-trimethyl-2H-benzo[b]pyran 3569
J. Magano, A. Acciacca, V. Beylin, J. Spence, P. Dunn, and M. Hughes

New Approach to 4- and 5-Aminopyrazole Derivatives 3579
H. M. E. Hassaneen

Selective Synthesis of β-Hydroxy Nitroethanol Ethers by Alcoholysis of Oxiranes 3589
J.-L Gras, M. Daoubi, and I. G. Collado

Simple Synthesis of 7-Amino-4,5-dihydrobenzo[*f*][1,4] oxazepin-3-ones 3599
H. Kwiecień and M. Szychowska

Alternatives to *N,N*-Diethyl-2,4-dimethoxybenzamide as a Precursor for the Synthesis of 6,8-Dimethoxy-3-methyl-3,4-dihydro-1*H*-isochromen-1-one 3611
W. A. L. van Otterlo, J. P. Michael, and C. B. de Koning

Microwave-Assisted Carbamoylation of Amines 3623
U. Azzena, G. Dettori, L. Pisano, and M. Pittalis

Tandem Ring Opening and Oximation of Ethyl 3-Aroyl-1-cyano-4-hydroxy-2,4,6-triarylcyclohexanecarboxylate by Hydroxylamine 3635
S. Saravanan, H. V. Babu, and S. Muthusubramanian

Synthesis of Some 3-Substituted Isochromen-1-ones 3649
S. S. Tajudeen and F. N. Khan

Studies on Sequential Claisen Rearrangement: Charge-Accelerated [3,3]-Sigmatropic Rearrangement Leading to Polyheterocycles 3657
K. C. Majumdar, D. Saha, and P. Debnath

Synthesis of Substituted Heterocyclic Thiourea Compounds **3667**
T. K. Venkatachalam and F. M. Uckun

Conjugate Addition of Triallylaluminum to α,β-Unsaturated Nitroalkenes to Produce 4,5-Unsaturated Nitroalkenes **3677**
K.-H. Shen, J.-T. Liu, Y.-R. Wu, and C.-F. Yao

Volume 37, Number 21, 2007

CONTENTS

Graphical Abstracts **3689**

Synthetic Access to New Pyridone Derivatives through the Alkylation Reactions of Hydroxypyridines with Epoxides **3697**
A. Kocak, S. Kurbanli, and S. Malkondu

New Convenient Reagents for Chemoselective *N*-Alkoxycarbonylation of (*S*)-Isoserine: Application in the Isepamicin Synthesis **3709**
K. Doktorov, V. Tarpanov, and P. Mechkarova

Novel Method for the Synthesis of [1,2,4]Triazino[4,3-*c*]quinazoline System **3719**
S. I. Kovalenko, A. V. Karpenko, O. V. Krivoshey, S. V. Shishkina, and O. V. Shishkin

Studies on the Selective Reduction of the Amide Link of Acyclic and Macrocyclic Amidoketals: Unexpected Cleavage and *trans*-Acetalization with Red-Al® **3729**
R. Affani and D. Dugat

Novel Atom-Economic Nitration of Benzene with a Nitrogen Dioxide–Oxygen System using Cocatalyst of Solid Oxides and Lanthanide(III) Metal Triflates **3741**
X. Du, X. Li, and Z. Xu

Samarium Triiodide–Catalyzed Formation of Mannich-Type Products by Amidoalkylation of 1,3-Dicarbonyl Compounds **3751**
X. Wang, H. Mao, Y. Yu, X. Zhu, and C. Zhu

Convenient Synthesis of Aryl Ferrocenyl Ketone via Palladium-Catalyzed Carbonylation Coupling 3759
D. Yang, Z. Liu, Y. Li, and B. Chen

Efficient One-Pot Synthesis of 2-Amino-4,6-diarylbenzene-1,3-dicarbonitrile under Solvent-Free Conditions 3767
L. Rong, H. Han, F. Yang, H. Yao, H. Jiang, and S. Tu

Novel Synthetic Route of (2*S*)-6-Fluoro-4-oxo-3,4-dihydro-2*H*-chromene-2-carboxylic Acid 3773
H.-J. Yuan, S. Qian, L. Hai, Y.-Y. Chen, and Y. Wu

Synthesis and Biological Evaluation of New 4-Deacety-1,7,9-trideoxy-10-oxopaclitaxel via Sinenxan A 3779
H. Du, M. Zhang, D. Yin, Y. Li, and X. Chen

Practical Synthesis of Structurally Important Spirodiamine Templates 3793
F.-Y. Tang, L.-Q. Qu, Y. Xu, R.-J. Ma, S.-H. Chen, and G. Li

Unexpected Rearrangement in the Reaction of 7-Mercapto-4-methylcoumarin with 1-Mono- and 1,1-Dimethyl Propargyl Alcohols 3801
S. Xu, X. Yan, Q. Zhang, P. Xia, and Y. Chen

Palladium-Catalyzed Kumada Reaction Employing Aminophosphine as Ligand 3809
L. Zhang, J. Cheng, W. Zhang, B. Lin, C. Pan, and J. Chen

Synthesis of 3-Aryl-5-*t*-butylsalicylaldehydes and Their Chiral Schiff Base Compounds 3815
H.-b. Liu, M. Wang, Y. Wang, Q. Gu, and L.-c. Sun

Ytterbium Perfluorooctanesulfonate–Catalyzed Synthesis of 1,5-Benzodiazepine Derivatives in Fluorous Solvents 3827
W.-B. Yi and C. Cai

Solid-State Photodimerization of 1,2-*Bis*(5′-pyrimidyl)ethene 3835
E. Bosch, J. M. Matheny, and N. Rath

New Phosphonate Reagents for Aldehyde Homologation 3841
R. J. Petroski

Comparison of Iodination of Methoxylated Benzaldehydes and Related Compounds using Iodine/Silver Nitrate and Iodine/Periodic Acid 3855
B. A. Hathaway, K. L. White, and M. E. McGill

Synthesis and Characterization of Novel Quaternary Ammonium RAFT Agents **3861**
A. Samakande, R. D. Sanderson, and P. C. Hartmann

Convenient Synthesis of Tributylsilyl Methacrylate **3873**
D. Mancardi, M. Sindt, J.-M. Paul, and J.-L. Mieloszynski

New Access to Organoacyloxytrialkylsilanes **3879**
D. Mancardi, M. Sindt, J.-M. Paul, and J.-L. Mieloszynski

Erratum **3885**